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1991
South Dakota
Motor Vehicle Traffic Accident Summary

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Governor

Prepared By
Department of Transportation
Accident Records Office

In Cooperation With
Department of Commerce & Regulation
Office Of Highway Safety

MARKS
SPOT
THE
THINK!
DRIVE
SAFELY

STATE OF SOUTH DAKOTA

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Dear Reader:

The facts contained in this booklet describe the accidents, injuries and loss of lives in South Dakota for 1991. A sobering thought, isn't it? The sad thing is, many of these accidents could have been avoided. The goal of the Traffic Accident Summary is to provide accurate and timely accident information in the promotion of safer highways.

A great deal of time has been spent compiling and analyzing the statistics in this booklet to help focus our efforts on high accident concentration areas. This data is used daily in highway safety analysis for planning and design considerations in the form of signing, pavement markings, roadway geometrics, and traffic control.

The Department of Transportation coordinates a Safety Review Team to identify the high accident and hazardous locations on South Dakota's public roads and streets. This information is utilized not only by the Department of Transportation, but also by students for school reports, libraries, law enforcement, and individuals conducting various research projects.

Awareness programs, such as Buckle-Up, South Dakota!, Drinking and Drugged Driving Awareness Week, and Don't Crowd the Plow, have brought about a better understanding of the need to keep people from drinking and driving and the benefits of wearing safety belts.

The results show we are making progress. In 1991, we witnessed the second lowest death rate in thirty years, the lowest number of alcohol-related deaths ever recorded, and seat belt usage of drivers in accidents at an all time high of thirty-four percent.

I am excited about these results. The combined efforts of individuals and groups, such as you the reader, can help us continue to save more lives.

Very truly yours,

GEORGE S. MICKELSON

South Dakota
GREAT FACES GREAT PLACES

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I. INTRODUCTION

The South Dakota Motor Vehicle Traffic Accident Summary was developed to provide an overview of the South Dakota traffic accident picture, as well as make frequently requested information available. Information from 1991 comprises the major portion of the book; however, basic historic trends are also provided for reference.

The Motor Vehicle Traffic Accident Summary is divided into two main sections, Historical Trends and 1991 Motor Vehicle Accident Profile. The Historical Trend section provides information on alcohol involvement in motor vehicle accidents, severity of injury by record type and sex of drivers involved in accidents. This section also provides data on restraint usage and accident trends. The 1991 Accident Profile section details the accident picture for 1991 as well as a glossary of terms.

The majority of the information in this book is provided by the Accident Records Section within the Department of Transportation. Current state law requires an accident report be filed for each motor vehicle traffic accident resulting in the death or injury of a person, or property damage to an apparent extent of five hundred dollars or more to any one person's property or one thousand dollars accumulated damage per accident. Law enforcement agencies provide the accident reports to Accident Records. These reports are available to the public for a fee of four dollars.

Examples of reports available through Accident Records are:

STANDARD REPORTS - These reports provide the user with a standard set of summary information for a preselected subset of all accidents, e.g., all accidents involving a drinking driver.

PLOT MAPS - These maps supply the user with a graphic display on which the location of each accident in a given geographic area has been plotted on transparent paper and scaled to overlay maps provided by the Department of Transportation.

SPECIAL REQUESTS - Special requests are answered using several computer packages, one of which is an on-line query system which provides almost immediate response to requests of a very specific nature.

For additional information or copies, write or call:

Accident Records Section
118 West Capitol Avenue
Pierre, SD 57501-2017
Phone: (605) 773-4156

SOUTH DAKOTA
STATISTICAL SUMMARY

1991

NUMBER OF REPORTED MOTOR VEHICLE TRAFFIC ACCIDENTS: 16,009

AMOUNT OF MOTOR VEHICLE TRAFFIC ACCIDENT PROPERTY DAMAGE: $45 million

NUMBER OF MOTOR VEHICLE TRAFFIC ACCIDENT INJURIES: 7,310

NUMBER OF MOTOR VEHICLE TRAFFIC ACCIDENT FATALITIES: 143

ECONOMIC LOSS FROM MOTOR VEHICLE TRAFFIC ACCIDENTS: $179 million

FATALITY RATE PER 100,000,000 MILES OF TRAVEL: 1.89

PERCENT OF DRIVERS IN FATAL ACCIDENTS WHO HAD BEEN DRINKING: 31.4%

NUMBER KILLED IN ALCOHOL-RELATED ACCIDENTS: 62

NUMBER INJURED IN ALCOHOL-RELATED ACCIDENTS: 1,253

NUMBER OF PEDESTRIANS KILLED: 11

NUMBER OF MOTORCYCLISTS KILLED: 10

NUMBER OF BICYCLISTS KILLED: 4

PERCENT OF LICENSED DRIVERS UNDER 25: 18%

PERCENT OF ACCIDENT-INVOLVED SPEEDING DRIVERS UNDER 25: 52.2%

PERCENT OF ACCIDENT-INVOLVED DRINKING DRIVERS UNDER 25: 39.8%

NUMBER OF OCCUPANTS KILLED IN MOTOR VEHICLES: 118, 15 WERE WEARING A SAFETY RESTRAINT (EXCLUDES MOPED, MOTORCYCLE & SNOWMOBILE OCCUPANTS)

NUMBER OF DWI CONVICTIONS: 6,012

SEATBELT USE RATE OF ACCIDENT-INVOLVED DRIVERS: 34.0%

NUMBER OF UNRESTRAINED OCCUPANTS UNDER 5 YEARS OF AGE KILLED IN MOTOR VEHICLE ACCIDENTS: 2

NUMBER OF PROPERLY RESTRAINED OCCUPANTS UNDER 5 YEARS OF AGE KILLED IN MOTOR VEHICLE ACCIDENTS: 0

AVERAGE TRAVEL SPEED ON POSTED 55 MPH SOUTH DAKOTA HIGHWAYS: 56.6 MPH

PERCENT OF MOTORISTS EXCEEDING 55 MPH ON POSTED 55 MPH HIGHWAYS: 59.0%

Source: Department of Transportation: Accident Records

II. HISTORICAL TRENDS

Motor Vehicle Accidents

The fatality rates per 100 million vehicle miles traveled from 1982-1991 for South Dakota, states surrounding South Dakota, and the nation are shown in TABLE 2-1. South Dakota's rate, the national rate, and the rate of those states bordering South Dakota have all shown a decline over the last ten years. FIGURE 2-1 compares South Dakota with the national rate and two comparable rural states, North Dakota and Wyoming.

TABLE 2-1
FATALITY RATE COMPARISON
1982-1991

State	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
South Dakota	2.7	2.7	2.2	2.0	2.0	1.9	2.0	2.1	2.0	1.9
Iowa	2.5	2.6	2.1	2.3	2.2	2.3	2.6	2.3	2.0	2.1
Minnesota	2.0	1.8	1.8	1.8	1.7	1.5	1.7	1.6	1.5	1.3
Montana	3.8	4.0	3.2	3.0	2.9	2.9	2.4	2.2	2.5	2.3
Nebraska	2.3	2.2	2.4	2.0	2.3	2.3	2.0	2.1	1.9	2.0
North Dakota	2.8	2.2	1.9	1.6	1.8	1.7	1.8	1.4	1.9	1.6
Wyoming	3.9	3.4	3.1	2.9	3.2	2.5	2.9	2.3	2.2	2.1
National	2.8	2.6	2.6	2.5	2.5	2.4	2.4	2.2	2.1	1.9

Note: Fatality Rate is the number of traffic fatalities per 100 million vehicle miles traveled.

Source: Department of Transportation: Accident Records

TABLE 2-2 provides a yearly comparison of South Dakota's motor vehicle traffic accidents from 1961 through 1991. Any comparison of motor vehicle accidents must be made with caution due to the changes in the definition of a reportable accident. For example, in the late 1970's the definition of a fatality caused by a motor vehicle accident was changed from the death occurring up to one year after the accident to death occurring within 30 days after the accident. There does not appear to be a single reason why there are fewer fatalities; however, the national 55 mph speed limit law initiated in 1974 and the increased efforts in the drinking driving area in 1981 have probably had the most impact. Other factors include improvements in the highways, safer vehicles, and traffic enforcement efforts. Although vehicle miles traveled dropped during 1991 and total accidents went up 6.2 percent, the injury accident rate stayed within one percent of 1990 and the death rate went down 5 percent.

FIGURE 2-1 FATALITY RATE COMPARISON
1981 - 1991

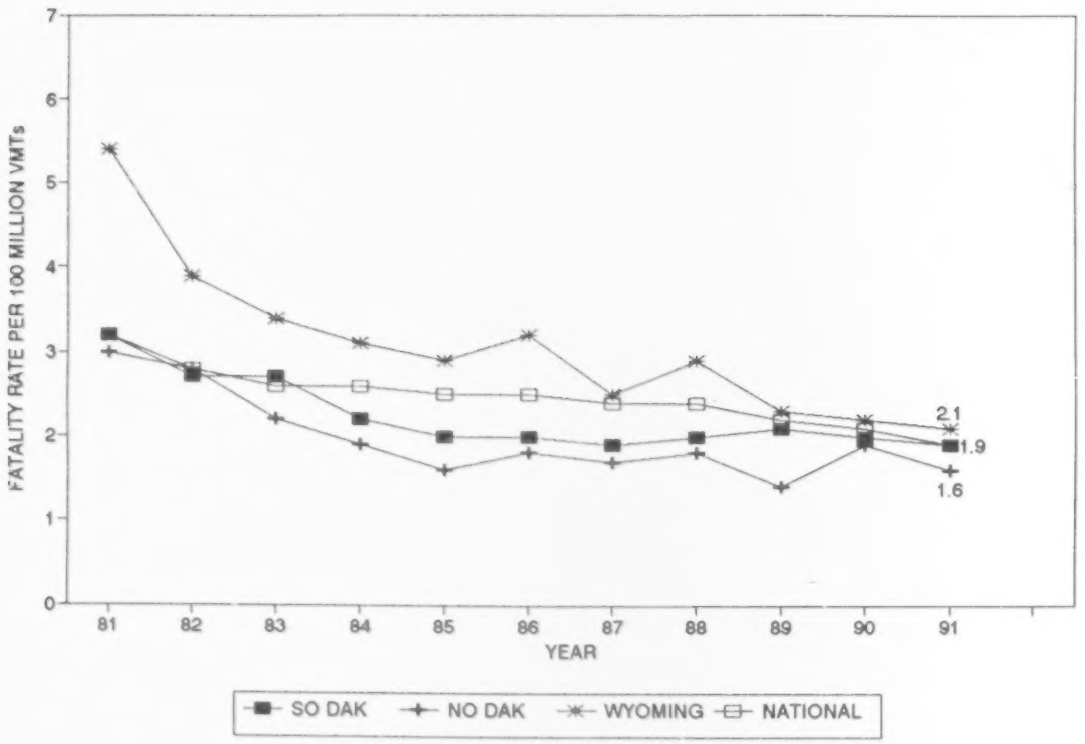


TABLE 2-2
SOUTH DAKOTA YEARLY COMPARISON
OF MOTOR VEHICLE TRAFFIC FATALITIES, INJURIES,
ACCIDENTS, MILES TRAVELED, & REGISTERED MOTOR VEHICLES

Year	Fatalities	Rate[1]	Injuries	Total Accd.	Fatal Accd.	Injury Accd.	PDO[2] Accd.	Miles[3] Traveled +(000,000)	Registered Motor Vehicles +(000)
1961	228	6.75	3,848	7,281	184	2,313	4,784	3,379	361
1962	246	6.77	4,248	8,805	191	2,592	6,022	3,631	377
1963	220	5.83	4,123	8,874	185	2,530	6,159	3,776	386
1964	270	7.03	4,569	9,349	211	2,816	6,322	3,839	387
1965	244	6.13	4,685	10,015	194	2,880	6,941	3,983	396
1966	265	6.50	5,072	10,821	205	3,087	7,529	4,075	402
1967	224	5.41	5,286	12,154	183	3,250	8,721	4,142	407
1968	255	5.91	5,612	14,061	215	3,396	10,450	4,313	409
1969	296	6.79	5,921	16,565	219	3,584	12,762	4,361	422
1970	238	5.12	5,492	16,165	189	3,395	12,581	4,648	427
1971	262	5.36	6,705	16,995	210	4,152	12,633	4,884	444
1972	294	5.83	6,718	17,883	235	4,267	13,381	5,039	467
1973	286	5.57	6,774	14,985	228	4,321	10,436[2]	5,136	494
1974	229	4.47	6,211	11,727	203	4,077	7,447	5,126	519
1975	198	3.82	6,769	15,146	163	4,398	10,585[2]	5,186	533
1976	224	4.07	7,423	15,755	188	4,840	10,727	5,503	554
1977	211	3.67	7,603	18,020	180	5,013	12,827	5,754	575
1978	194	3.33	7,861	18,085	168	5,263	12,654[2]	5,830	599
1979	211	3.76	7,189	16,059	169	4,826	11,064	5,614	616
1980	228	4.18	7,147	14,845	188	4,770	9,887	5,456	622
1981	177	3.17	6,771	14,375	162	4,614	9,599	5,582	637
1982	148	2.68	6,174	14,605	129	4,192	10,284	5,528	640
1983	175	2.73	6,287	14,971	147	4,175	10,649	6,406[3]	655
1984	143	2.24	6,158	15,093	132	4,297	10,664	6,394	669
1985	130	2.02	6,240	15,435	109	4,229	11,097	6,443	674
1986	134	1.98	6,008	13,714	118	4,105	9,491[2]	6,762	686
1987	134	1.87	6,221	13,083	107	4,173	8,803	7,171	711
1988	147	2.04	6,579	14,821	127	4,455	10,239	7,213	709
1989	152	2.06	6,828	15,005	134	4,605	10,266	7,366	719
1990	153	2.01	7,261	15,073	139	4,820	10,114	7,624	698
1991	143	1.89	7,310	16,009	130	4,830	11,049	7,581	710

[1]Number of fatalities per 100 million vehicle miles traveled.

[2]Prior to July 1, 1973 the threshold for a reportable property damage only (PDO) accident was $100 to one person's property. July 1, 1973 the PDO amount was increased to $250.

January 1, 1975, the PDO threshold definition changed to accumulated property damage of $250 or more. July 1, 1978 the PDO threshold was increased to $400 accumulated property damage. July 1, 1986, the PDO threshold definition changed to $500 damage to any one person's property or $1000 accumulated property damage per accident.

[3]1983 the formula for computing VMTs was adjusted, resulting in an approximate 9.5% increase in annual VMTs.

Source: Department of Transportation: Accident Records

Alcohol Involvement

Significant changes took place in alcohol involved accidents during 1991. All categories of accidents showed a decrease in percentages (see TABLE 2-3 and FIGURES 2-2 and 2-3). The area of fatal accidents and fatalities being the most significant. The 62 alcohol involved deaths being the lowest number of alcohol related deaths since South Dakota started keeping records. The 1,253 (17.1%) injuries recorded was not the lowest number, however, it was the lowest percentage recorded during the last 10 years.

TABLE 2-3
ALCOHOL INVOLVED ACCIDENTS AS PERCENT OF ALL ACCIDENTS
1985-1991

	1985	1986	1987	1988	1989	1990	1991
Total Accidents	11.2 (1728)	11.5 (1577)	10.8 (1416)	10.6 (1566)	10.2 (1528)	10.9 (1644)	9.9 (1578)
Fatal Accidents	51.4 (56)	54.2 (64)	48.6 (52)	50.4 (64)	52.2 (70)	51.1 (71)	43.8 (57)
Injury Accidents	19.2 (810)	18.7 (769)	17.5 (731)	18.1 (808)	16.8 (773)	18.2 (878)	16.2 (784)
PDO Accidents	7.8 (862)	7.8 (744)	7.2 (633)	6.8 (694)	6.7 (685)	6.9 (695)	6.7 (737)
Fatalities	53.1 (69)	55.2 (74)	49.3 (66)	47.6 (70)	52.6 (80)	52.3 (80)	43.4 (62)
Injuries	20.5 (1280)	20.2 (1214)	19.0 (1183)	19.6 (1289)	18.4 (1255)	19.2 (1397)	17.1 (1253)

NOTE: Alcohol involvement for Fatal Accidents is based upon a positive BAC result and/or indication of alcohol use as reported by the investigating officer.

Fatal, Injury and Property Damage Accidents - At least one driver, pedestrian or bicycle driver had been drinking in the opinion of the investigating officer.

Source: Department of Transportation: Accident Records

FIGURE 2-2 1991 TRAFFIC FATALITIES
Alcohol Related vs Non Alcohol Related

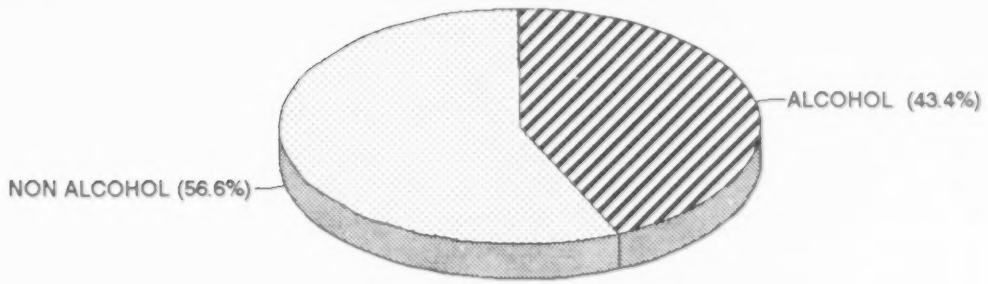
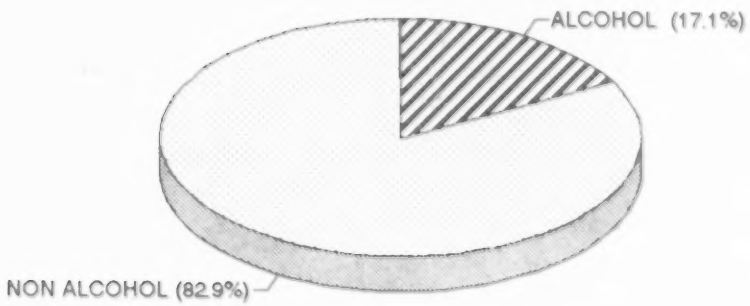


FIGURE 2-3 1991 TRAFFIC INJURIES
Alcohol Related vs Non Alcohol Related



The upward trend for alcohol-related accidents in recent years turned around during 1991, the numbers and percentages decreased for the first time in four years. Table 2-4 compares alcohol-related fatal and injury accidents, nonalcohol-related fatal and injury accidents and DWI arrests.

TABLE 2-4
ACCIDENT AND ARREST ACTIVITY
1980 - 1991

	FATAL ACCIDENTS		FATAL & INJURY ACCIDENTS		
	ALCOHOL RELATED	NONALCOHOL RELATED	ALCOHOL RELATED	NONALCOHOL RELATED	DWI ARRESTS
1980	105	83	1391	3567	4151
1981	100	62	1366	3410	5068
1982	77	52	1007	3314	6842
1983	72	75	1007	3315	9840
1984	71	61	965	3464	9972
1985	56	53	866	3472	9363
1986	64	54	833	3390	9485
1987	52	55	783	3497	8369
1988	64	63	872	3710	7134
1989	70	64	843	3896	6963*
1990	71	68	949	4010	7539
1991	57	73	841	4119	6999

*Delayed Chemical Test Data was added to file.
Source: Department of Transportation: Accident Records

FIGURE 2-4 presents the annual counts of DWI arrests, alcohol-related fatal and injury accidents, and nonalcohol-related fatal and injury accidents for 1980 through 1991. FIGURE 2-5 presents the alcohol-related and nonalcohol-related fatal accident experience.

There were 57 alcohol-related fatal accidents during 1991, which compares to 71 in 1990. The previous three-year average was 68.

There were 841 alcohol-related fatal and injury accidents during 1991, which compares to 949 in 1990. The previous three-year average was 888 or a 5.3 percent decrease in 1991. Nonalcohol-related fatal and injury accidents in 1991 increased (2.7%) when compared to 1990 and increased 6.4 percent from the previous three-year average.

There were an estimated 6,999 DWI arrests in 1991. This level is down (3%) from the previous three-year average and up substantially from 1980.

FIG 2-4 F&I ACCIDENTS AND DWIs
1981 - 1991

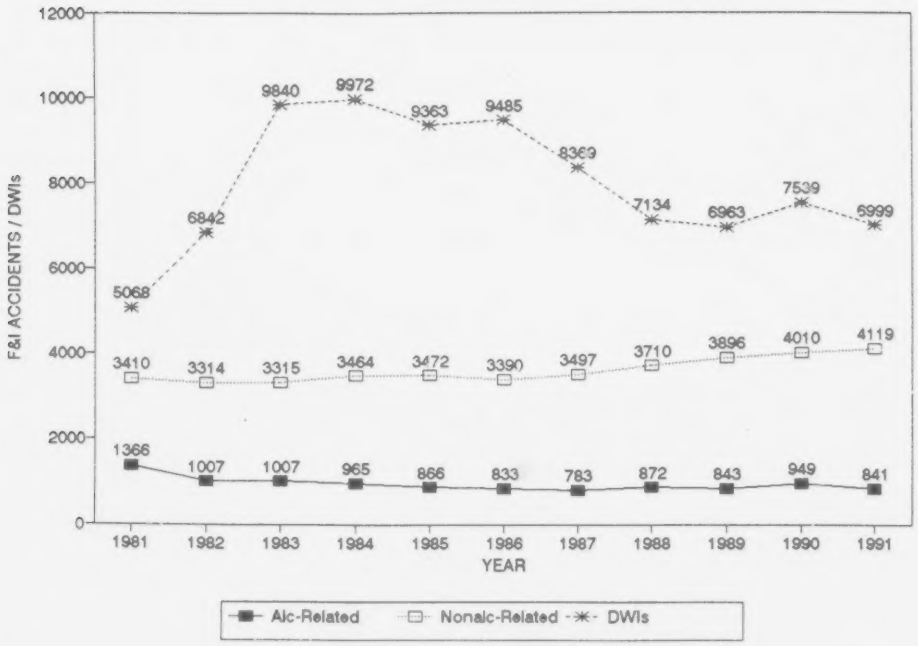
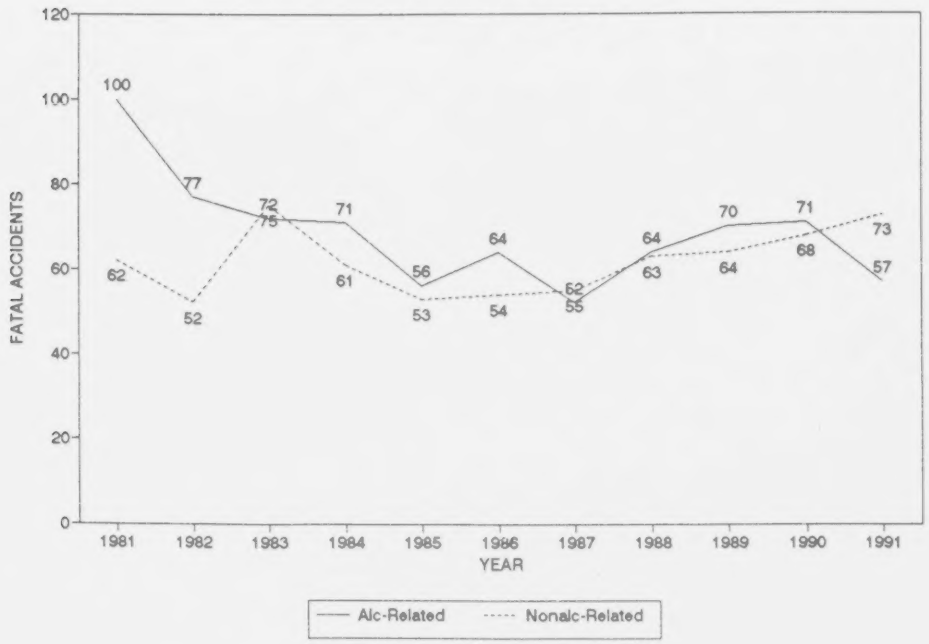


FIG 2-5 FATAL ACCIDENTS
1981 - 1991



SAFETY RESTRAINT USAGE AND CHILD INJURIES

The use of safety equipment is reported on all motor vehicle drivers and only on those passengers that are injured. During 1991 a record of 34.0 percent of the motor vehicle drivers in accidents were using safety restraints (see TABLE 2-5). Seventy-one drivers were killed while not using any safety restraint, while eight drivers were killed using lap and shoulder harness, one was killed wearing a shoulder harness only and 2 were killed wearing a lap belt only (does not include drivers of motorcycles, mopeds and snowmobiles). The increased usage of safety restraints by accident involved drivers is an indication that safety restraint usage is increasing in South Dakota. Twenty-one passengers were killed while not using a safety restraint and four were killed while wearing a shoulder harness and lap belt, one was killed in a child restraint not properly used.

TABLE 2-5
SAFETY RESTRAINT USAGE
ACCIDENT-INVOLVED DRIVERS
1986 - 1991

USAGE RATE

AGE	1986	1987	1988	1989	1990	1991
14-15	7.6%	8.5%	12.7%	14.1%	18.4%	22.2%
16-17	6.8%	9.3%	10.4%	14.8%	15.2%	19.6%
18-20	9.9%	14.1%	16.3%	16.7%	19.3%	23.2%
21-24	13.4%	19.0%	24.2%	25.0%	29.5%	31.4%
25-34	17.8%	22.9%	28.2%	31.3%	33.6%	38.1%
35-44	18.6%	26.4%	29.7%	32.8%	36.6%	42.5%
45-54	17.4%	24.0%	28.7%	33.1%	36.6%	40.6%
55-64	17.2%	22.7%	29.1%	31.5%	35.6%	40.0%
65-Over	14.5%	19.5%	23.2%	24.7%	28.9%	34.2%
Total	14.6% (2718)	19.6% (3482)	23.8% (4819)	26.4% (5422)	29.6% (6057)	34.0% (7471)

Source: Department of Transportation: Accident Records

FIGURE 2-6 SAFETY RESTRAINT USAGE
ACCIDENT INVOLVED DRIVERS

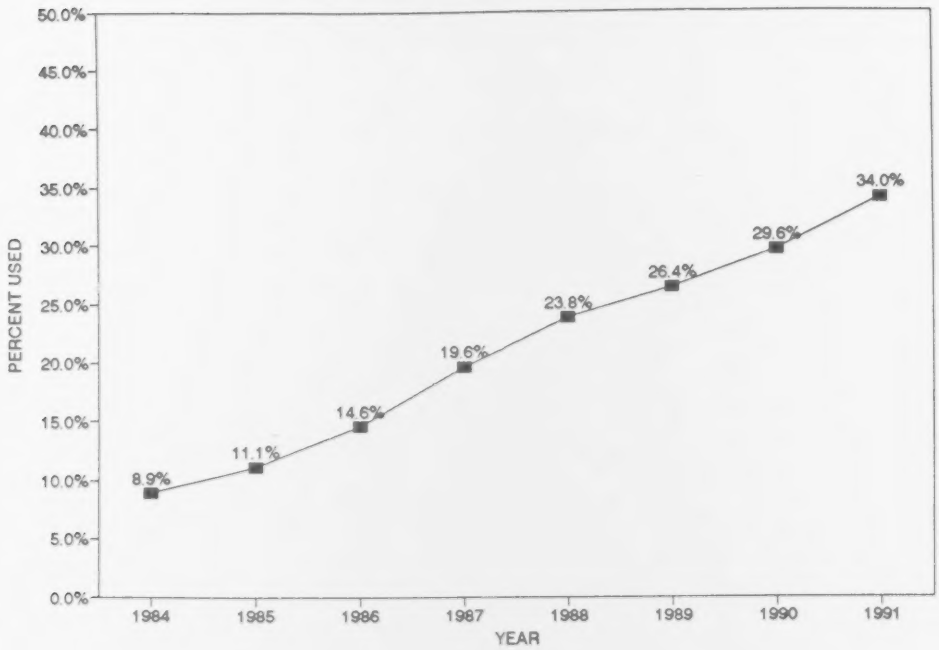


TABLE 2-5A
FATALITIES AND INJURIES TO MOTOR VEHICLE OCCUPANTS
BY SAFETY EQUIPMENT USAGE
1991

	Fatalities	Injuries
No Safety Equipment	92	4,579
Lap Belt Only	2	206
Shoulder Harness Only	1	54
Lap Belt & Shoulder Harness	12	1,277
Child Restraint Used Properly	0	35
Child Restraint Not Properly Used	1	5
Other Type Restraints	0	10
Not Stated or Unknown	10	414
TOTAL	118	6,580

Note: Motor vehicle drivers and passengers are considered occupants. Motorcycle drivers and motorcycle passengers are not counted in this table.

Source: Department of Transportation: Accident Records

Motor vehicle occupants from birth through four years of age accounted for two fatalities during 1991, which compares to one fatality in 1990 and the previous three-year average of 1.7 (see TABLE 2-6). One child killed was not restrained, the other was in a child safety restraint that was not properly used.

There were 143 children (birth through 4 years) injured in 1991, which compares to 113 in 1990 and the three-year average of 133.

TABLE 2-6
FATALITIES & INJURIES TO MOTOR VEHICLE OCCUPANTS
UNDER 5 YEARS OF AGE

YEAR	FATALITIES	SERIOUS INJURY	SLIGHT INJURY	TOTAL NONFATAL INJURIES
1981	0	107	44	151
1982	3	85	47	132
1983	5	86	63	149
1984	3	78	61	139
1985	4	74	50	124
1986	4	70	51	121
1987	3	87	59	146
1988	3	101	50	151
1989	1	83	52	135
1990	1	67	46	113
1991	2	87	56	143

NOTE: Table includes passengers of Motor vehicles normally equipped with safety restraints.

TABLE 2-6A
FATALITIES & INJURIES TO MOTOR VEHICLE OCCUPANTS UNDER 5 YEARS OLD
BY SAFETY EQUIPMENT USAGE

	Fatalities	Injuries
No Safety Equipment Used	1	70
Lap Belt Only	0	15
Shoulder Harness Only	0	0
Lap Belt & Shoulder Harness	0	12
Child Restraint Used Properly	0	35
Child Restraint Not Used Properly	1	5
Other Type Restraints	0	0
Not Stated or Unknown	0	6
TOTAL	2	143

Source: Department of Transportation: Accident Records

Cycle and Pedestrian Accidents

The following tables provide a yearly comparison of South Dakota's motorcycle, pedestrian, and bicycle accidents, injuries, and fatalities from 1971 through 1991. During the last 10 years the average number of motorcycle involved accidents is 510 and 14 deaths per year. The 407 accidents and 10 deaths for 1991 is well below average. Moped accidents are included with motorcycle accidents. Over the years only one fatal moped accident has been recorded in South Dakota, and the number of injuries is small. See pages 45-50 for additional motorcycle, pedestrian, and bicycle accident information.

TABLE 2-7
MOTORCYCLE ACCIDENTS
1971 - 1991

Year	Motorcycle Accidents Total	Fatal	Injury	Motorcyclists Fatalities	Injuries	Registered Motorcycles	Licensed Motorcyclists
1971	336	11		13	342	13,865	
1972	314	6		8	312	16,605	
1973	395	13		14	425	19,737	
1974	344	8		9	372	22,964	
1975	377	14	321	14	388	23,980	
1976	465	9	402	9	501	25,058	
1977	495	17	419	19	529	26,560	
1978	523	14	456	14	560	27,590	34,225
1979	597	21	522	22	664	31,102	37,286
1980	707	17	608	18	763	35,045	41,431
1981	697	15	598	15	729	38,265	43,170
1982	548	12	473	13	581	38,418	Not Available
1983	573	12	489	12	591	39,255	45,544
1984	564	10	488	10	567	38,956	45,763
1985	551	14	469	15	569	37,905	45,805
1986	475	10	405	10	492	36,036	45,210
1987	399	13	347	14	417	33,800	44,956
1988	424	13	371	13	441	31,421	44,058
1989	377	14	329	14	394	29,942	45,844
1990	492	20	432	23	555	23,719	46,184
1991	407	9	359	10	420	24,133	46,986

Source: Department of Transportation: Accident Records

TABLE 2-8
PEDESTRIAN FATALITIES AND INJURIES
1971 - 1991

Year	Fatalities	Injuries
1971	15	170
1972	30	199
1973	21	161
1974	25	158
1975	11	179
1976	24	158
1977	21	164
1978	15	185
1979	16	167
1980	21	162
1981	20	130
1982	16	146
1983	20	139
1984	14	139
1985	8	136
1986	15	165
1987	7	126
1988	14	149
1989	10	125
1990	15	138
1991	11	165

TABLE 2-9
BICYCLE FATALITIES AND INJURIES
1971 - 1991

Year	Fatalities	Injuries
1971	4	90
1972	2	94
1973	4	82
1974	2	115
1975	1	108
1976	3	99
1977	7	89
1978	3	82
1979	4	96
1980	0	78
1981	0	83
1982	1	93
1983	1	99
1984	4	95
1985	3	119
1986	1	115
1987	1	157
1988	2	137
1989	2	144
1990	3	135
1991	4	147

Source: Department of Transportation: Accident Records

Holiday Counts

TABLE 2-10 provides a yearly comparison of South Dakota motor vehicle accident experience during major holiday observances. These counts are frequently requested.

TABLE 2-10
ACCIDENTS DURING HOLIDAYS
1979 - 1991

Holiday	Total Hours	Total Accd.	Fatal Accd.	Injury Accd.	Fatalities	Injuries
MEMORIAL DAY*						
1979	78	144	3	60	3	91
1980	78	128	5	46	12	71
1981	78	129	3	48	3	65
1982	78	129	2	45	2	75
1983	78	119	4	43	4	77
1984	78	110	0	36	0	54
1985	78	124	3	44	3	65
1986	78	142	3	37	3	56
1987	78	97	1	28	1	47
1988	78	127	2	36	2	68
1989	78	121	1	46	1	63
1990	78	120	1	39	2	51
1991	78	155	2	58	2	84
FOURTH OF JULY						
1979	30	60	0	27	0	40
1980	78	166	3	56	3	86
1981	78	174	2	63	2	97
1982	78	160	1	64	1	106
1983	78	136	1	46	1	82
1984	30	61	1	22	1	33
1985	102	170	1	58	1	93
1986	78	109	4	47	4	94
1987	78	124	1	53	4	74
1988	78	138	2	48	2	74
1989	102	185	3	67	3	119
1990	30	64	1	20	1	34
1991	102	195	1	61	1	91
LABOR DAY						
1979	78	140	1	55	1	83
1980	78	108	2	35	2	65
1981	78	149	2	68	2	105
1982	78	134	1	62	1	100
1983	78	132	5	48	6	71
1984	78	111	3	42	3	64
1985	78	127	3	40	3	63
1986	78	106	1	34	1	62
1987	78	135	2	44	3	73

*Nationally Observed

Holiday	Total Hours	Total Accd.	Fatal Accd.	Injury Accd.	Fatalities	Injuries
LABOR DAY (cont'd)						
1988	78	131	1	45	1	94
1989	78	134	1	58	4	101
1990	78	123	2	51	3	84
1991	78	118	1	43	1	64
THANKSGIVING						
1979	102	223	3	48	3	67
1980	102	192	3	63	8	9[illegible]
1981	102	197	0	39	0	5[illegible]
1982	102	184	2	47	2	67
1983	102	210	2	44	3	71
1984	102	194	2	56	2	83
1985	102	272	0	51	0	76
1986	102	162	3	37	3	63
1987	102	255	2	56	3	91
1988	102	224	1	42	1	70
1989	102	232	2	61	2	112
1990	102	186	1	48	1	65
1991	102	365	3	69	3	116
CHRISTMAS						
1979	102	162	4	53	4	80
1980	102	222	3	58	3	92
1981	78	103	3	21	3	42
1982	78	198	1	42	1	72
1983	78	155	0	30	0	47
1984	102	195	0	35	0	52
1985	54	97	1	13	2	25
1986	102	88	1	28	1	51
1987	102	209	1	63	2	108
1988	78	153	1	38	1	57
1989	78	179	1	50	1	87
1990	102	178	1	34	1	55
1991	54	52	0	16	0	24
NEW YEARS						
1979-80	102	204	3	62	5	91
1980-81	102	169	1	58	1	106
1981-82	78	147	1	32	1	42
1982-83	78	137	2	29	2	39
1983-84	78	166	0	41	0	59
1984-85	102	132	2	24	2	39
1985-86	54	98	1	19	1	27
1986-87	102	138	1	30	1	49
1987-88	102	151	0	33	0	43
1988-89	78	103	2	23	2	40
1989-90	78	84	0	31	0	50
1990-91	102	166	2	43	2	71
1991-92	54	95	1	28	1	47

Source: Department of Transportation: Accident Records

SEVERITY OF INJURIES BY RECORD TYPE

The following tables provide a yearly comparison of South Dakota's total injuries, drivers injuries, passengers injuries, bicyclists injuries and pedestrians injuries from 1983 though 1991. The percentages are row percentages.

Note: For definition of class of injury see page 20.

TABLE 2-11
FATALITIES AND SEVERITY OF INJURIES
OF TOTAL PERSONS

Year	Incapacitating Injuries No.	%	Non-Incapacitating Injuries No.	%	Possible Injuries No.	%	Total Injuries	Total Killed
1983	1263	20.2	2915	46.5	2086	33.3	6264	175
1984	1193	19.5	2688	43.9	2238	36.6	6119	143
1985	1223	19.6	2759	44.2	2257	36.2	6239	130
1986	1234	20.5	2563	42.7	2211	36.8	6008	134
1987	1249	20.1	2738	44.0	2234	35.9	6221	134
1988	1307	19.9	2818	42.8	2454	37.3	6579	147
1989	1366	20.0	2770	40.6	2692	39.4	6828	152
1990	1501	20.7	3009	41.4	2751	37.9	7261	153
1991	1598	21.9	2945	40.3	2767	37.9	7310	143

TABLE 2-12
FATALITIES AND SEVERITY OF INJURIES
OF TOTAL DRIVERS

Year	Incapacitating Injuries No.	%	Non-Incapacitating Injuries No.	%	Possible Injuries No.	%	Total Injuries	Total Killed
1983	725	18.7	1778	45.9	1368	35.3	3871	94
1984	743	18.8	1676	42.4	1533	38.8	3952	85
1985	711	18.0	1698	43.0	1543	39.0	3952	71
1986	720	18.8	1598	41.7	1513	39.5	3831	70
1987	726	18.8	1663	43.0	1482	38.3	3871	79
1988	786	18.8	1720	41.0	1685	40.2	4191	82
1989	782	18.2	1676	39.0	1841	42.8	4299	87
1990	936	20.2	1842	39.7	1857	40.1	4635	100
1991	927	20.0	1792	38.7	1913	41.3	4632	98

TABLE 2-13
FATALITIES AND SEVERITY OF INJURIES
OF TOTAL PASSENGERS

Year	Incapacitating Injuries No.	%	Non-Incapacitating Injuries No.	%	Possible Injuries No.	%	Total Injuries	Total Killed
1983	448	20.8	1027	47.6	683	31.6	2158	60
1984	366	18.9	904	46.7	665	34.4	1935	40
1985	434	21.3	931	45.7	670	32.9	2035	49
1986	407	21.4	842	44.3	650	34.2	1899	48
1987	428	20.7	950	45.9	692	33.4	2070	47
1988	433	20.6	961	45.7	711	33.8	2105	49
1989	501	22.1	971	42.9	791	35.0	2263	53
1990	480	20.4	1035	44.0	839	35.6	2354	35
1991	562	23.7	997	42.1	809	34.2	2368	30

TABLE 2-14
FATALITIES AND SEVERITY OF INJURIES
OF TOTAL BICYCLE DRIVERS

Year	Incapacitating Injuries No.	%	Non-Incapacitating Injuries No.	%	Possible Injuries No.	%	Total Injuries	Total Killed
1983	21	21.9	60	62.5	15	15.6	96	1
1984	20	21.5	53	57.0	20	21.5	93	4
1985	33	28.4	64	55.2	19	16.4	116	2
1986	32	28.3	59	52.2	22	19.5	113	1
1987	37	24.0	80	51.9	37	24.0	154	1
1988	28	20.9	79	59.0	27	20.1	134	2
1989	37	26.2	76	53.9	28	19.9	141	2
1990	29	22.0	72	54.5	31	23.5	132	3
1991	34	23.6	85	59.0	25	17.4	144	4

TABLE 2-15
FATALITIES AND SEVERITY OF INJURIES
OF TOTAL PEDESTRIANS

Year	Incapacitating Injuries No.	%	Non-Incapacitating Injuries No.	%	Possible Injuries No.	%	Total Injuries	Total Killed
1983	69	49.6	50	36.0	20	14.4	139	20
1984	64	46.0	55	39.6	20	14.4	139	14
1985	45	33.1	66	48.5	25	18.4	136	8
1986	75	45.5	64	38.8	26	15.8	165	15
1987	58	46.0	45	35.7	23	18.3	126	7
1988	60	40.3	58	38.9	31	20.8	149	14
1989	46	36.8	47	37.6	32	25.6	125	10
1990	56	40.6	60	43.5	22	15.9	138	15
1991	75	45.5	70	42.4	20	12.1	165	11

Sex of Drivers

Table 2-16 provides a yearly comparison of drivers involved in motor vehicle accidents by sex of driver. The table also compares licensed drivers by sex.

TABLE 2-16
SEX OF DRIVERS
1991

	ACCIDENT INVOLVED DRIVERS				LICENSED DRIVERS			
	MALE		FEMALE		MALE		FEMALE	
	No.	%	No.	%	No.	%	No.	%
1986	13,669	64.3	7,599	35.7	248,184	51.2	236,756	48.8
1987	12,815	64.0	7,213	36.0	247,418	51.0	238,137	49.0
1988	14,688	64.2	8,207	35.8	244,576	50.7	238,130	49.3
1989	14,581	63.1	8,520	36.9	251,120	51.0	241,468	49.0
1990	14,347	62.3	8,666	37.7	248,959	50.6	243,500	49.4
1991	15,263	62.5	9,156	37.5	252,916	50.5	247,717	49.5

Note: Unknown Sex of Accident Involved Drivers is not included in Accident Involved Drivers table.

III. 1991 MOTOR VEHICLE ACCIDENT PROFILE

Introduction

This section profiles the reported motor vehicle traffic accidents for 1991. Information will be given on where the accidents are occurring, when accidents happen, who is involved, and factors that contribute to accidents or why they are occurring. **Column percentages may not total 100 percent due to rounding error.**

During 1991, there were 16,009 reported motor vehicle traffic accidents, the majority of accidents being property damage only 11,049 (69%). Injury accidents accounted for 4,830 (30%) of the accidents, while 130 (1%) were fatal accidents. There were 7,310 persons injured and 143 persons killed in accidents during 1991 (see TABLE 3-1).

TABLE 3-1
FATALITIES AND SEVERITY OF INJURIES OF DRIVERS,
PASSENGERS, PEDESTRIANS, AND BICYCLE DRIVERS
1991

	Incapac. Injuries		Non-Incapac. Injuries		Possible Injuries		Total Nonfatal Injuries		Total Fatalities	
	No.	%	No.	%	No.	%	No.	%	No.	%
Drivers	927	58.0	1,792	60.9	1,913	69.1	4,632	63.4	98	68.5
Passengers	562	35.2	997	33.9	809	29.2	2,368	32.4	30	21.0
Pedestrians	75	4.7	70	2.4	20	0.7	165	2.3	11	7.7
Bicycle Dr.	34	2.1	85	2.9	25	0.9	144	2.0	4	2.8
Total	1,598	100	2,944*	100	2,767	100	7,309*	100	143	100

*This table is missing 1 injury when compared to statewide injuries. There was 1 non-incapacitating injury sustained by a horse back rider.

Definition of Injuries:

Killed: An injury which results in death. An injury caused death that occurs within 30 days of an accident is considered an accident fatality.

Incapacitating: Any injury other than a fatal which prevents the injured person from walking, driving, or normally continuing the activities he/she was capable of performing before the injury occurred (severe lacerations, broken limbs or unable to leave the scene of the accident without assistance).

Non-Incapacitating: Any injury other than a fatal injury or incapacitating injury which is evident to observers at the scene of the accident (minor lacerations, lumps on the head, abrasions and bruises).

Possible Injury: Any injury reported or claimed which is not a fatal injury, incapacitating injury, or non-incapacitating injury (momentary unconsciousness, limping, nausea, or complaint of pain).

Source: Department of Transportation: Accident Records

TABLE 3-2 provides information on persons killed and injured by method or mode of transportation. During 1991, 54 percent of the fatalities and nearly two-thirds of the injuries occurred to occupants of passenger cars. Occupants of pickups and vans accounted for nearly 24 percent of the fatalities. Additionally, in 1991 11 pedestrians, 10 motorcyclists, and four bicyclists were killed (bicycles are included in Other on FIGURES 3-1 and 3-2).

TABLE 3-2
FATALITIES AND INJURIES BY MODE OF TRANSPORTATION
1991

	Fatalities		Injuries	
	No.	%	No.	%
Passenger Cars	77	53.8	4,693	64.2
Pickups, Vans	34	23.8	1,702	23.3
Pedestrians	11	7.7	165	2.3
Motorcycle, Moped	10	7.0	420	5.7
Trucks (All)*	7	4.9	125	1.7
Bicycle	4	2.8	147	2.0
Farm Machinery	0	0.0	11	0.2
Other	0	0.0	47	0.6
Total	143	100	7,310	100

*Trucks	Fatalities	Injuries
Straight Truck	4	59
Straight Truck with Trailer	0	8
Truck Tractor Only	0	2
Truck Tractor with Single Semi Trailer	3	55
Truck Tractor with Two or More Trailers	0	1
Total	7	125

Note: Other includes Bus, Motor Home, Heavy Equipment, Other Type Motor Vehicles.

Source: Department of Transportation: Accident Records

FIGURE 3-1 FATALITIES BY TRAVEL MODE
1991

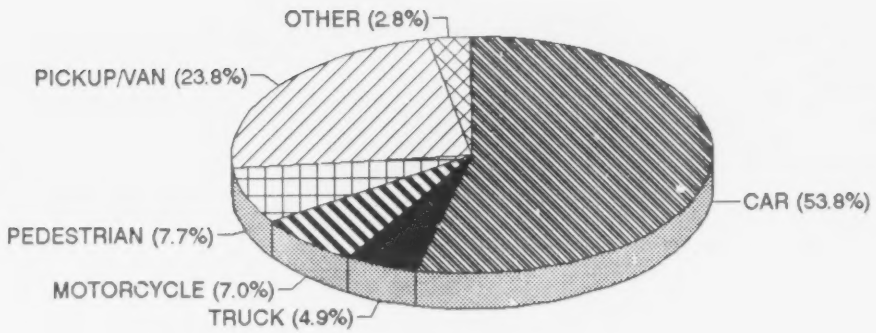


FIGURE 3-2 INJURIES BY TRAVEL MODE
1991

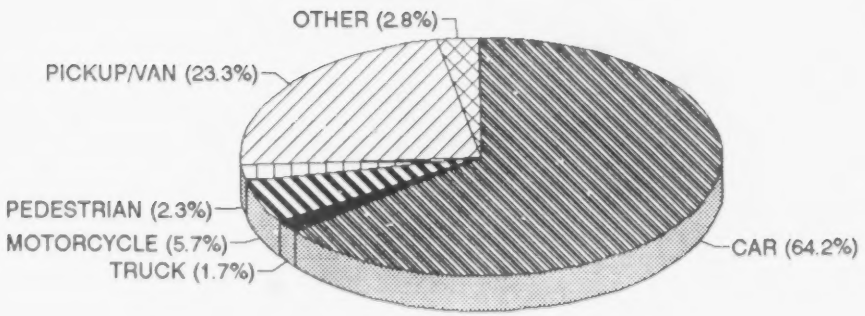


TABLE 3-3 provides information on all accident-involved vehicles by type. Twenty-two (12.4%) of the fatal accidents involved a vehicle classified as a truck. This compares to 10 (5%) for 1990. Passenger cars made up 53.9 percent of the vehicles involved in fatal accidents and 65.4 percent of those involved in injury accidents.

TABLE 3-3
VEHICLE TYPES INVOLVED IN ACCIDENTS
1991

	All Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
Passenger Cars	16,520	63.7	96	53.9	5,266	65.4	11,158	63.0
Pickups, Vans	7,816	30.1	49	27.5	2,097	26.0	5,670	32.0
Trucks (All)*	824	3.2	22	12.4	230	2.9	572	3.2
Motorcycle	412	1.6	9	5.1	368	4.6	35	0.2
Farm Machinery or Heavy Equipment	90	0.3	0	0.0	34	0.4	56	0.3
Bus	71	0.3	0	0.0	18	0.2	53	0.3
Motor Home	31	0.1	0	0.0	7	0.1	24	0.1
Moped	8	0.0	0	0.0	8	0.1	0	0.0
Snowmobile	1	0.0	0	0.0	0	0.0	1	0.0
Other or Unknown	169	0.7	2	1.1	23	0.3	144	0.8
Total	25,942	100	178	100	8,051	100	17,713	100

*Trucks	All Accd.	Fatal Accd.	Injury Accd.	PDO Accd.
Straight Truck	370	8	110	252
Straight Truck with Trailer	56	1	21	34
Truck Tractor Only	16	1	2	13
Truck Tractor with Single Semi Trailer	355	10	92	253
Truck Tractor with Two or More Trailers	27	2	5	20
Total	824	22	230	572

Source: Department of Transportation: Accident Records

TABLE 3-4 provides information on the ages of persons killed and injured. Thirteen (9.1%) of the fatalities were 13 years of age or younger. The ages of 16 - 18 tallied 1,002 (13.7%) of the total injured people.

TABLE 3-4
FATALITIES AND INJURIES
BY AGE GROUP
1991

	Fatalities		Injuries	
	No.	%	No.	%
0 - 5	2	1.4	205	2.8
6 - 13	11	7.7	487	6.7
14 - 15	5	3.5	456	6.2
16 - 18	8	5.6	1,002	13.7
19 - 20	5	3.5	524	7.2
21 - 24	19	13.3	836	11.4
25 - 34	22	15.4	1,343	18.4
35 - 44	29	20.3	978	13.4
45 - 54	15	10.5	499	6.8
55 - 64	7	4.9	383	5.2
65-Over	20	14.0	524	7.2
Unknown	0	0.0	73	1.0
Total	143	100	7,310	100

Source: Department of Transportation: Accident Records

First Harmful Event

The initial incident which causes injury or damage is referred to as the first harmful event. A motor vehicle collision with a fixed object represented 26 percent of the fatal accidents and only 16 percent of the total accidents (see TABLE 3-5). Animal involved accidents accounted for 15 percent of the total accidents. This is an upward trend.

TABLE 3-5
FIRST HARMFUL EVENT
1991

First Harmful Event	Total Accidents No.	%	Fatal Accidents No.	%	Injury Accidents No.	%	PDO Accidents No.	%
Motor Vehicle Collision With:								
Another MV (Not Parked)	8,168	51.0	44	33.8	2,697	55.8	5,427	49.1
A Fixed or Other Object	2,587	16.2	34	26.2	816	16.9	1,737	15.7
An Animal	2,351	14.7	2	1.5	104	2.2	2,245	20.3
A Parked Motor Vehicle	991	6.2	1	0.8	116	2.4	874	7.9
A Pedestrian	153	1.0	11	8.5	142	2.9	0	0.0
A Bicyclist	153	1.0	4	3.1	147	3.0	2	0.0
A Railroad Vehicle	27	0.2	0	0.0	14	0.3	13	0.1
Non-Collision (Overturning or Other)	1,579	9.9	34	26.2	794	16.4	751	6.8
Total	16,009	100	130	100	4,830	100	11,049	100

Source: Department of Transportation: Accident Records

Manner of Collision

The most common type or manner of collision between two or more vehicles is a rear-end collision. Rear-end collisions constitute 11.4 percent of the fatal accidents, 38.1 percent of the injury accidents, and 25.2 percent of the property damage only accidents. Angle collisions are second in prevalence accounting for 31.8 percent of the fatal accidents, 29.4 percent of the injury accidents and 27.2 percent of the property damage only accidents. Head-on collisions are over represented in fatal accidents where they account for 38.6 percent of the accidents as compared to only 2.6 percent of the total accidents (see TABLE 3-6).

TABLE 3-6
MANNER OF COLLISION FOR ACCIDENTS INVOLVING A COLLISION
BETWEEN TWO OR MORE MOTOR VEHICLES
1991

Manner of Collision	Total Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
Rear-End	2,400	29.4	5	11.4	1,027	38.1	1,368	25.2
Head-On	216	2.6	17	38.6	110	4.1	89	1.6
Angle	2,284	28.0	14	31.8	793	29.4	1,477	27.2
Sideswipe-Same Direction	656	8.0	5	11.4	98	3.6	553	10.2
Sideswipe-Opposite Dir.	213	2.6	0	0.0	41	1.5	172	3.2
Turning Movement	1,973	24.2	2	4.5	587	21.8	1,384	25.5
Backing Movement	425	5.2	1	2.3	41	1.5	383	7.1
Unknown	1	0.0	0	0.0	0	0.0	1	0.0
Total	8,168	100	44	100	2,697	100	5,427	100

Source: Department of Transportation: Accident Records

Highway System

The number of reported accidents by highway system is presented in TABLE 3-7. Injury and PDO accidents happened predominately within city limits. City streets and alleys experienced 37.4 percent of the PDO accidents and 37.5 percent of the injury accidents.

Seventy-two percent of the fatal accidents occurred on noninterstate rural roads with 51 fatal accidents on U.S./State highways and 43 on County/Local roads. The Interstate system experienced ten percent of the total accidents while accounting for an estimated 20 percent of the vehicle miles traveled in 1991 (see FIGURES 3-3 and 3-4).

TABLE 3-7
ACCIDENTS BY TYPE OF HIGHWAY
1991

Type of Highway	Total Accidents Number	%	Fatal Accidents Number	%	Injury Accidents Number	%	PDO Accidents Number	%
Interstate	1,604	10.0	17	13.1	380	7.9	1,207	10.9
US/State Hwys.-Rural	2,789	17.4	51	39.2	708	14.7	2,030	18.4
Co./Local Rds.-Rural	2,853	17.8	43	33.1	908	18.8	1,902	17.2
US/State Hwys.-City	2,809	17.5	7	5.4	1,022	21.2	1,780	16.1
City Streets/Alleys	5,954	37.2	12	9.2	1,812	37.5	4,130	37.4
Total	16,009	100	130	100	4,830	100	11,049	100

Source: Department of Transportation: Accident Records

FIGURE 3-3 1991 TRAFFIC ACCIDENTS
By Highway System Type

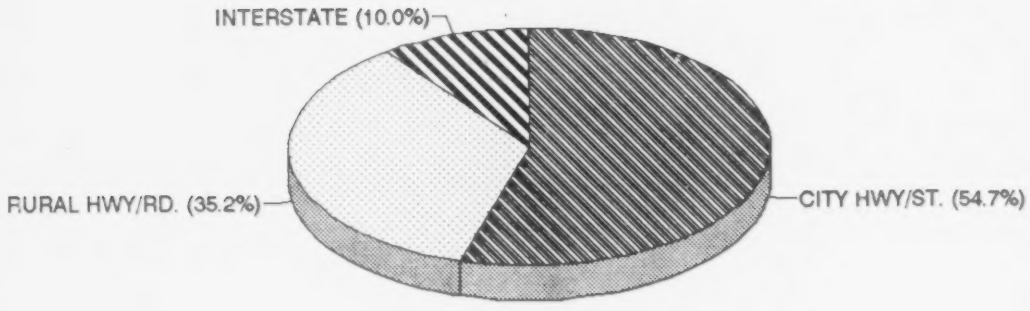
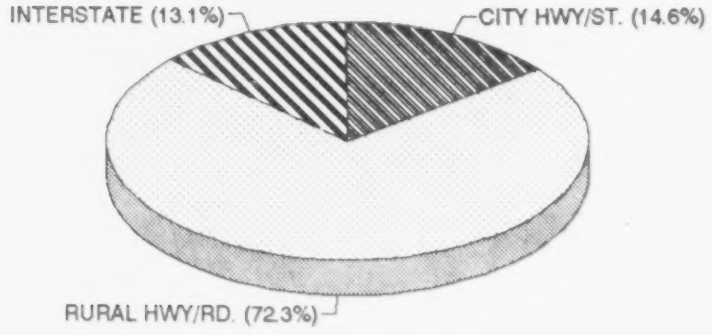


FIGURE 3-4 1991 FATAL TRAFFIC ACCID'S
By Highway System Type



County Summary

TABLE 3-8 provides a summary of all reported accidents by county in South Dakota.

Rural fatal and injury accidents occurred predominately in twelve counties (see TABLE 3-9). Each of these counties reported at least two percent of all rural fatal and injury accidents. The twelve accounted for 55.4 percent of rural fatal and injury accidents and 22.4 percent of all fatal and injury accidents in South Dakota. Pennington County had 11.6 percent of all rural fatal and injury accidents with Minnehaha and Lawrence counties accounting for 7.8 and 6.4 percent, respectively. FIGURE 3-5 presents the percentage involvement of rural fatal and injury accidents and compares this to the percentage of rural vehicle miles traveled in these counties.

City Summary

Reported traffic accidents within South Dakota's cities (population of 2,500 and more) are presented in TABLE 3-10. These cities reported 55.9 percent of the statewide injury accidents and 10.8 percent of the fatal accidents. The two largest cities (Sioux Falls, Rapid City) accounted for 63.3 percent of fatal and injury accidents and 54.6 percent of the property damage only accidents that occurred in cities with populations of 2,500 or more.

Roadway Surface Conditions

The majority of the accidents occurred on dry roads, including fatal and injury accidents (see TABLE 3-11). Combining similar "bad" road conditions, ice, snow, frost, and slush accounts for 22.3 percent of all reported property damage accidents and 14.2 percent of all fatal and injury accidents. Seventy-four percent of all fatal and injury accidents occurred on dry roads.

Contributing Circumstances (Vision Obscurement and Other)

Contributing circumstances at the accident level involve two categories: vision obscurement and other. The reporting officer may include one, two, or no contributing circumstances for each category. Vision obscurement refers to conditions such as: fog or smoke, blowing soil, dirt or sand, rain, snow, sleet or hail, windshield or window obscured, glare from sun or lights, trees or other vegetation, snowbank, etc. Vision obscurement as a contributing circumstance was indicated in 17.7 percent of all accidents with two separate vision obscurements being reported in 2.3 percent of all accidents. Rain, snow, sleet or hail was the most frequently reported vision obscurement and was indicated as a problem in 5.4 percent of all accidents.

Contributing Circumstances - Other - was reported in 30.5 percent of all accidents with two Contributing Circumstances-Other being reported in 2.7 percent of all accidents. These contributing circumstances include wind conditions, slippery surface, road shoulder conditions, objects or animals in the road, phantom vehicle, pedestrians, bicyclists, road construction conditions, rough roads, and faulty or missing traffic control devices. The most common condition reported was slippery surface, and it was reported as a factor in 18.4 percent of all accidents.

TABLE 3-8
REPORTED TRAFFIC ACCIDENTS
SOUTH DAKOTA COUNTIES
1991

County	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd	Fatalities	Injuries
AURORA	81	2	20	59	2	32
BEADLE	339	1	95	243	1	135
BENNETT	44	1	13	30	1	22
BON HOMME	87	1	24	62	2	35
BROOKINGS	497	3	133	361	3	190
BROWN	915	4	291	620	5	432
BRULE	144	0	34	110	0	60
BUFFALO	20	0	11	9	0	24
BUTTE	168	3	42	123	3	71
CAMPBELL	38	0	7	31	0	8
CHARLES MIX	111	2	36	73	2	59
CLARK	82	1	11	70	1	18
CLAY	190	1	46	143	1	61
CODINGTON	495	4	174	317	4	260
CORSON	64	3	19	42	3	34
CUSTER	268	4	76	188	4	124
DAVISON	561	1	162	398	1	250
DAY	109	1	24	84	1	31
DEUEL	79	2	20	57	2	26
DEWEY	89	2	19	68	2	19
DOUGLAS	25	1	7	17	1	9
EDMUNDS	95	1	23	71	1	38
FALL RIVER	108	2	38	68	2	64
FAULK	53	0	8	45	0	10
GRANT	122	1	41	80	1	63
GREGORY	82	1	23	58	1	29
HAAKON	71	0	15	56	0	20
HAMLIN	100	1	19	80	2	28
HAND	124	2	27	95	2	50
HANSON	74	5	11	58	5	15
HARDING	45	1	6	38	1	7
HUGHES	360	0	97	263	0	136
HUTCHINSON	90	3	19	68	6	34
HYDE	15	0	2	13	0	4
JACKSON	75	2	19	54	2	30
JERAULD	56	0	11	45	0	14
JONES	57	0	15	42	0	28
KINGSBURY	112	3	21	88	3	26
LAKE	219	1	47	171	3	76
LAWRENCE	757	3	169	585	3	263
LINCOLN	306	4	104	198	4	156
LYMAN	115	1	28	86	1	45
MC COOK	112	2	30	80	2	39
MC PHERSON	23	0	6	17	0	8

TABLE 3-8 (continued)

County	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd	Fatalities	Injuries
MARSHALL	80	1	12	67	1	19
MEADE	445	2	150	293	2	222
MELLETTE	12	2	1	9	2	4
MINER	61	0	14	47	0	16
MINNEHAHA	3,451	16	1,179	2,256	18	1,777
MOODY	171	1	49	121	1	74
PENNINGTON	2,549	10	942	1,597	10	1,434
PERKINS	60	1	14	45	1	18
POTTER	74	0	8	66	0	8
ROBERTS	80	0	24	56	0	31
SANBORN	67	2	15	50	2	23
SHANNON	97	6	29	62	6	71
SPINK	164	0	33	131	0	44
STANLEY	66	1	23	42	3	27
SULLY	55	2	8	45	2	9
TODD	30	7	9	14	7	23
TRIPP	138	0	39	99	0	42
TURNER	123	4	34	85	5	53
UNION	221	2	71	148	2	104
WALWORTH	107	1	21	85	1	41
YANKTON	352	2	105	245	2	179
ZIEBACH	29	0	7	22	0	8
Total:	16,009	130	4,830	11,049	143	7,310

Source: Department of Transportation: Accident Records

TABLE 3-9
COUNTIES HAVING MORE THAN TWO PERCENT OF THE
RURAL FATAL & INJURY ACCIDENTS
1991

County	Rural Fatal & Injury Accidents	Percent of All Rural Fatal & Injury Accidents	1991 Percent of Rural VMTS
PENNINGTON	232	11.6	5.8
MINNEHAHA	157	7.8	5.6
LAWRENCE	128	6.4	3.1
MEADE	110	5.5	2.9
LINCOLN	89	4.4	3.6
CUSTER	68	3.4	1.7
BROWN	63	3.1	3.2
UNION	60	3.0	3.3
BROOKINGS	54	2.7	2.4
CODINGTON	53	2.6	2.4
YANKTON	52	2.6	1.6
MOODY	45	2.2	2.0

Note: Total Rural Fatal and Injury Accidents: 2,007

Source: Department of Transportation: Accident Records

FIGURE 3-5 RURAL F&I ACC/VMT'S
SELECTED COUNTIES

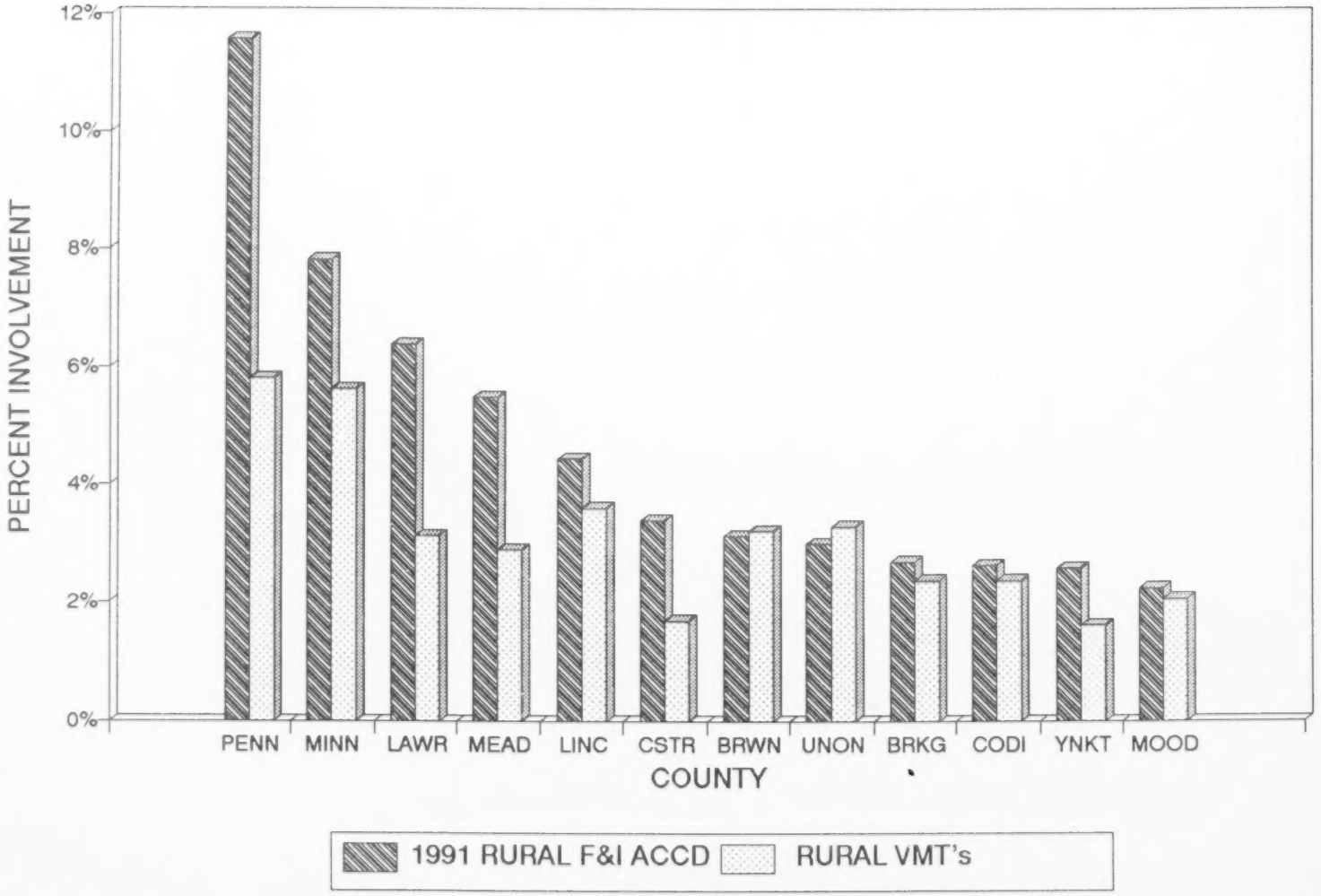


TABLE 3-10
TRAFFIC ACCIDENTS SOUTH DAKOTA CITIES
POPULATION 2500 AND OVER
1991

City	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
Aberdeen	655	0	226	429	0	328
Belle Fourche	63	0	15	48	0	21
Box Elder	59	1	18	40	1	27
Brandon City	24	0	6	18	0	7
Brookings	242	0	80	162	0	109
Canton	43	0	11	32	0	15
Hot Springs	39	0	15	24	0	27
Huron	204	0	73	131	0	101
Lead	73	0	17	56	0	21
Madison	92	0	18	74	0	23
Milbank	61	0	16	45	0	30
Mitchell	462	1	128	333	1	196
Mobridge	46	0	6	40	0	12
Pierre	271	0	78	193	0	109
Rapid City	1,725	5	687	1,033	5	1,050
Redfield	27	0	3	24	0	3
Sioux Falls	2,783	4	1,022	1,757	4	1,510
Sisseton	13	0	2	11	0	2
Spearfish	117	0	19	98	0	33
Sturgis	121	0	40	81	0	54
Vermillion	103	0	25	78	0	34
Watertown	327	3	121	203	3	173
Winner	76	0	22	54	0	23
Yankton	198	0	53	145	0	79

Source: Department of Transportation: Accident Records

TABLE 3-11
ROADWAY SURFACE CONDITIONS
1991

	Total Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
Dry	11,012	68.8	101	77.7	3,566	73.8	7,345	66.5
Wet	1,661	10.4	12	9.2	524	10.8	1,125	10.2
Ice	1,725	10.8	9	6.9	357	7.4	1,359	12.3
Frost	244	1.5	3	2.3	77	1.6	164	1.5
Slush	204	1.3	1	0.8	54	1.1	149	1.3
Snow	998	6.2	2	1.5	203	4.2	793	7.2
Mud	23	0.1	0	0.0	8	0.2	15	0.1
Other	63	0.4	1	0.8	24	0.5	38	0.3
Unknown	79	0.5	1	0.8	17	0.4	61	0.6
Total:	16,009	100	130	100	4,830	100	11,049	100

Source: Department of Transportation: Accident Records

Accidents by Time of Day, Month, and Day of Week

The late afternoon, 3:00-5:59 p.m., was the peak three-hour period for accidents to occur. Twenty-two percent of property damage only and 26.0 percent of injury accidents occurred during this time period. The one-hour period, 4:00 p.m.-5:00 p.m., had the most fatal accidents (12) and the most fatalities (12) (see TABLE 3-12).

The month of August had the most fatal accidents (18) or 13.8 percent of the total fatal accidents for the year. The 856 injuries recorded for August represented 11.7 percent of total injuries for 1991.

Friday and Saturday account for 32.8 percent of the injury accidents and 39.2 percent of the fatal accidents (see TABLE 3-14).

FIGURES 3-6 through 3-8 illustrate the trends of time of day, month, and day of week.

TABLE 3-12
ACCIDENTS BY TIME OF DAY
1991

Time	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
Midnight	355	7	117	231	7	166
1:00 AM	347	4	123	220	4	165
2:00 AM	336	9	118	209	10	181
3:00 AM	224	4	73	147	4	98
4:00 AM	142	4	50	88	4	58
5:00 AM	234	2	55	177	2	67
6:00 AM	396	5	98	293	5	136
7:00 AM	772	4	202	566	4	286
8:00 AM	714	3	193	518	3	285
9:00 AM	534	2	149	383	2	216
10:00 AM	550	3	158	389	4	243
11:00 AM	770	7	231	532	10	337
12:00 PM	862	5	279	578	7	451
1:00 PM	833	6	272	555	6	429
2:00 PM	916	6	310	600	6	485
3:00 PM	1,274	8	424	842	10	654
4:00 PM	1,249	12	423	814	12	661
5:00 PM	1,194	9	409	776	11	605
6:00 PM	898	7	251	640	7	377
7:00 PM	783	2	221	560	2	360
8:00 PM	724	5	167	552	6	251
9:00 PM	700	5	177	518	6	284
10:00 PM	609	4	166	439	4	268
11:00 PM	476	4	143	329	4	222
Unknown	117	3	21	93	3	25
	16,009	130	4,830	11,049	143	7,310

Source: Department of Transportation: Accident Records

TABLE 3-13
ACCIDENTS BY MONTH
1991

Month	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
JANUARY	1,255	10	331	914	10	497
FEBRUARY	1,095	7	283	805	7	406
MARCH	1,035	8	303	724	10	454
APRIL	1,047	14	355	678	18	551
MAY	1,264	6	432	826	6	642
JUNE	1,311	14	459	838	16	706
JULY	1,334	16	483	835	16	748
AUGUST	1,414	18	546	850	20	856
SEPTEMBER	1,276	10	419	847	10	622
OCTOBER	1,628	5	451	1,172	5	685
NOVEMBER	1,989	12	440	1,537	12	655
DECEMBER	1,361	10	328	1,023	13	488
Total	16,009	130	4,830	11,049	143	7,310

Source: Department of Transportation: Accident Records

TABLE 3-14
ACCIDENTS BY DAY OF WEEK
1991

Day	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
SUNDAY	1,816	17	588	1,211	19	936
MONDAY	2,204	9	627	1,568	10	892
TUESDAY	2,216	16	675	1,525	16	999
WEDNESDAY	2,178	19	652	1,507	19	1,006
THURSDAY	2,349	18	705	1,626	21	1,036
FRIDAY	2,878	20	830	2,028	21	1,272
SATURDAY	2,368	31	753	1,584	37	1,169
Total	16,009	130	4,830	11,049	143	7,310

Source: Department of Transportation: Accident Records

FIGURE 3-6 ACCIDENTS BY TIME OF DAY
1991

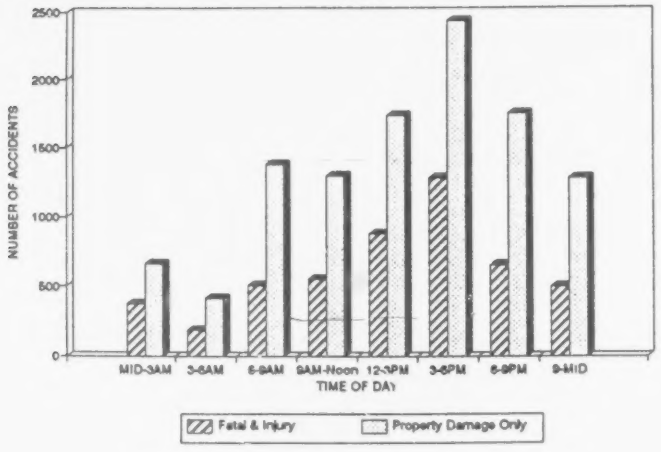


FIGURE 3-7 ACCIDENTS BY MONTH
1991

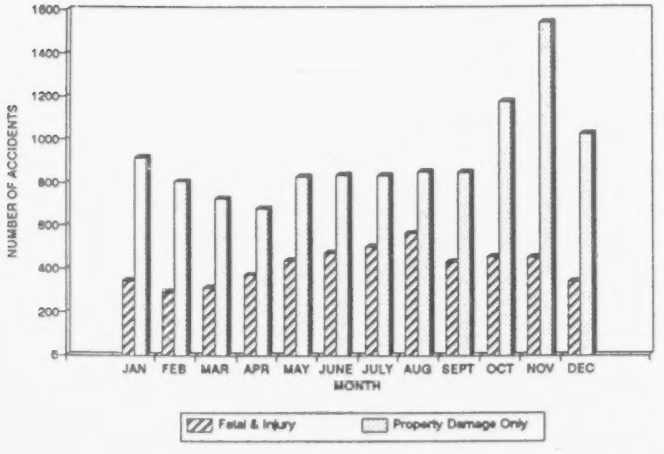
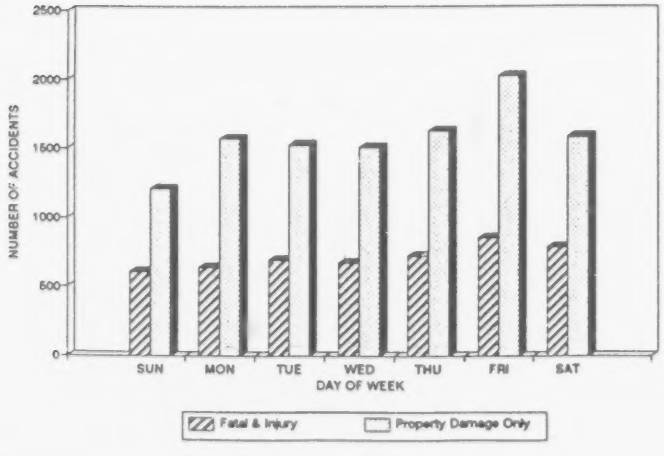


FIGURE 3-8 ACCIDENTS BY DAY OF WEEK
1991



Drivers

There were 24,632 motor vehicle drivers in the 16,009 reported motor vehicle accidents, including 172 drivers in fatal accidents and 7,848 drivers in injury accidents. Ninety-eight drivers were killed, which is 68.5 percent of all persons killed in motor vehicle accidents and 63.4 percent or 4,632 of the 7,310 injured were drivers.

Young drivers are involved in more accidents than any other age group (see TABLE 3-15). In reported accidents 35.1 percent of the drivers were under 25 years of age and 57.5 percent are under 35. Age of drivers involved in fatal and injury accidents follow the pattern of drivers in all accidents. Those drivers under 25 represent 25.0 percent of the drivers involved in fatal accidents and 38.2 percent of the drivers in injury accidents. Drivers under the age of 35 make up 47.7 percent of the drivers in fatal accidents and 60.3 percent of the drivers in injury accidents. There were 6 drivers under age 16 involved in fatal accidents during 1991.

TABLE 3-15
AGE OF DRIVERS IN ACCIDENTS
1991

Age	Drivers In All Accidents No.	%	Drivers In Fatal Accidents No.	%	Drivers In Injury Accidents No.	%	Drivers In PDO Accidents No.	%
6-13	32	0.1	1	0.6	14	0.2	17	0.1
14-15	965	3.9	5	2.9	344	4.4	616	3.7
16-18	3,121	12.7	9	5.2	1,068	13.6	2,044	12.3
19-20	1,778	7.2	5	2.9	581	7.4	1,192	7.2
21-24	2,759	11.2	23	13.4	988	12.6	1,748	10.5
25-34	5,505	22.3	39	22.7	1,736	22.1	3,730	22.5
35-44	4,203	17.1	39	22.7	1,295	16.5	2,869	17.3
45-54	2,140	8.7	20	11.6	665	8.5	1,455	8.8
55-64	1,611	6.5	8	4.7	485	6.2	1,118	6.7
65-Over	2,258	9.2	19	11.0	631	8.0	1,608	9.7
Unknown	260	1.1	4	2.3	41	0.5	215	1.3
Total	24,632	100	172	100	7,848	100	16,612	100

Source: Department of Transportation: Accident Records

Drinking drivers between the ages of 21 and 44 represented 68.5 percent of the drinking drivers in fatal accidents. TABLE 3-16 provides information on the age of drinking drivers in motor vehicle accidents. There were a reported 1,602 drinking drivers in all accidents which is 6.5 percent of all drivers in accidents. Fifty-four or 31.4 percent of drivers in fatal accidents had been drinking while 10.0 percent of the drivers involved in injury accidents had been drinking. Young drivers are predominantly the drinking drivers in accidents. Those drivers under 25 years of age accounted for 25.9 percent of the drinking drivers in fatal accidents, and 39.7 percent of the drinking drivers in injury accidents. Those drivers under 35 years of age accounted for 55.6 percent the drinking drivers in fatal accidents and 72.3 percent of the drinking drivers in all accidents.

TABLE 3-16
AGE OF DRINKING DRIVERS IN ACCIDENTS
1991

Age	Drivers In All Accidents No.	%	Drivers In Fatal Accidents No.	%	Drivers In Injury Accidents No.	%	Drivers In PDO Accidents No.	%
6-13	0	0.0	0	0.0	0	0.0	0	0.0
14-15	12	0.7	0	0.0	9	1.1	3	0.4
16-18	161	10.0	2	3.7	73	9.3	86	11.3
19-20	152	9.5	1	1.9	76	9.6	75	9.9
21-24	312	19.5	11	20.4	155	19.7	146	19.2
25-34	521	32.5	16	29.6	256	32.5	249	32.8
35-44	261	16.3	10	18.5	133	16.9	118	15.5
45-54	96	6.0	8	14.8	44	5.6	44	5.8
55-64	44	2.7	2	3.7	24	3.0	18	2.4
65-Over	29	1.8	2	3.7	14	1.8	13	1.7
Unknown	14	0.9	2	3.7	4	0.5	8	1.1
Total	1,602	100	54	100	788	100	760	100

Source: Department of Transportation: Accident Records

TABLE 3-17 compares age of drivers in fatal and injury accidents, drinking drivers in fatal and injury accidents, and speeding drivers in fatal and injury accidents with licensed drivers by age. Again the young driver is over represented as those drivers in fatal and injury accidents, drinking drivers in fatal and injury accidents, and speeding drivers in fatal and injury accidents. Over 18 percent of the licensed drivers in South Dakota were under 25, but 38.8 percent of the drinking drivers in fatal and injury accidents and 54.8 percent of the speeding drivers in fatal and injury accidents were under 25 years of age. Over seventy-one percent of the drinking drivers and 75.8 percent of the speeding drivers in fatal and injury accidents were under 35 years of age while drivers under 35 years of age constitute 38.8 percent of all licensed drivers (also see FIGURES 3-9 and 3-10).

TABLE 3-17
LICENSED DRIVERS AND FATAL AND INJURY ACCIDENT-INVOLVED DRIVERS BY AGE
1991

Age	Licensed Drivers %	Drivers In Fatal & Injury Accidents No.	%	Drinking Drivers In Fatal & Injury Accidents No.	%	Speeding Drivers In Fatal & Injury Accidents No	%
0-13	0.0	15	0.2	0	0.0	6	0.5
14-15	1.9	349	4.4	9	1.1	80	6.5
16-17	3.4	742	9.3	37	4.4	164	13.2
18	1.7	335	4.2	38	4.5	68	5.5
19	1.7	291	3.6	40	4.8	72	5.8
20	1.9	295	3.7	37	4.4	64	5.2
21-24	7.5	1,011	12.6	166	19.7	224	18.1
25-34	20.7	1,775	22.1	272	32.3	261	21.1
35-44	19.9	1,334	16.6	143	17.0	167	13.5
45-54	12.7	685	8.5	52	6.2	60	4.8
55-64	11.2	493	6.1	26	3.1	29	2.3
65-Over	17.4	650	8.1	16	1.9	35	2.8
Unknown	0.0	45	0.6	6	0.7	8	0.6
TOTAL	100	8,020	100	842	100	1,238	100

Sources: Department of Transportation: Accident Records
Department of Commerce & Regulation: Driver License Issuance

FIGURE 3-9 DRIVERS BY AGE GROUP 1991

Fatal and Injury Accd. Involved Drivers

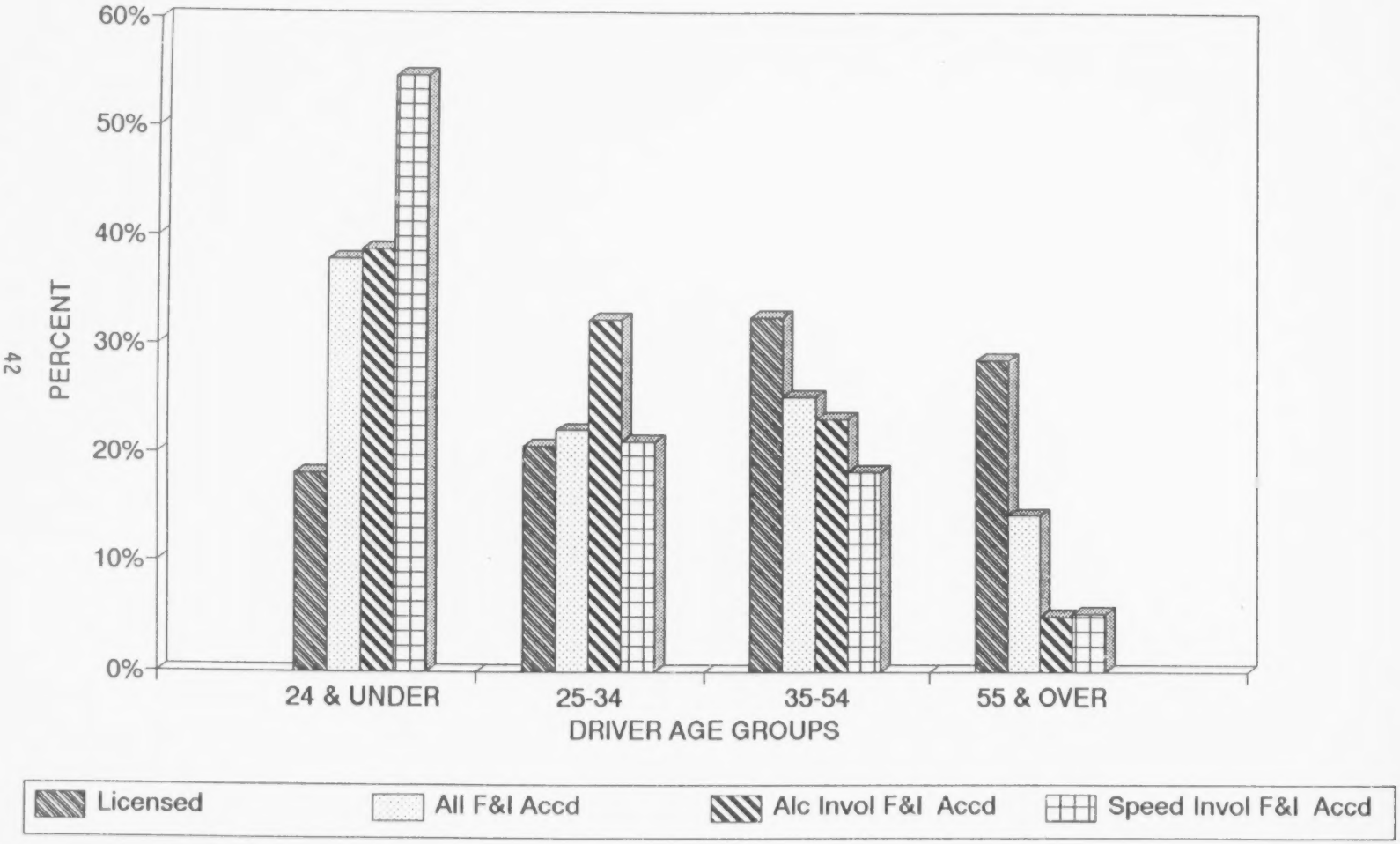
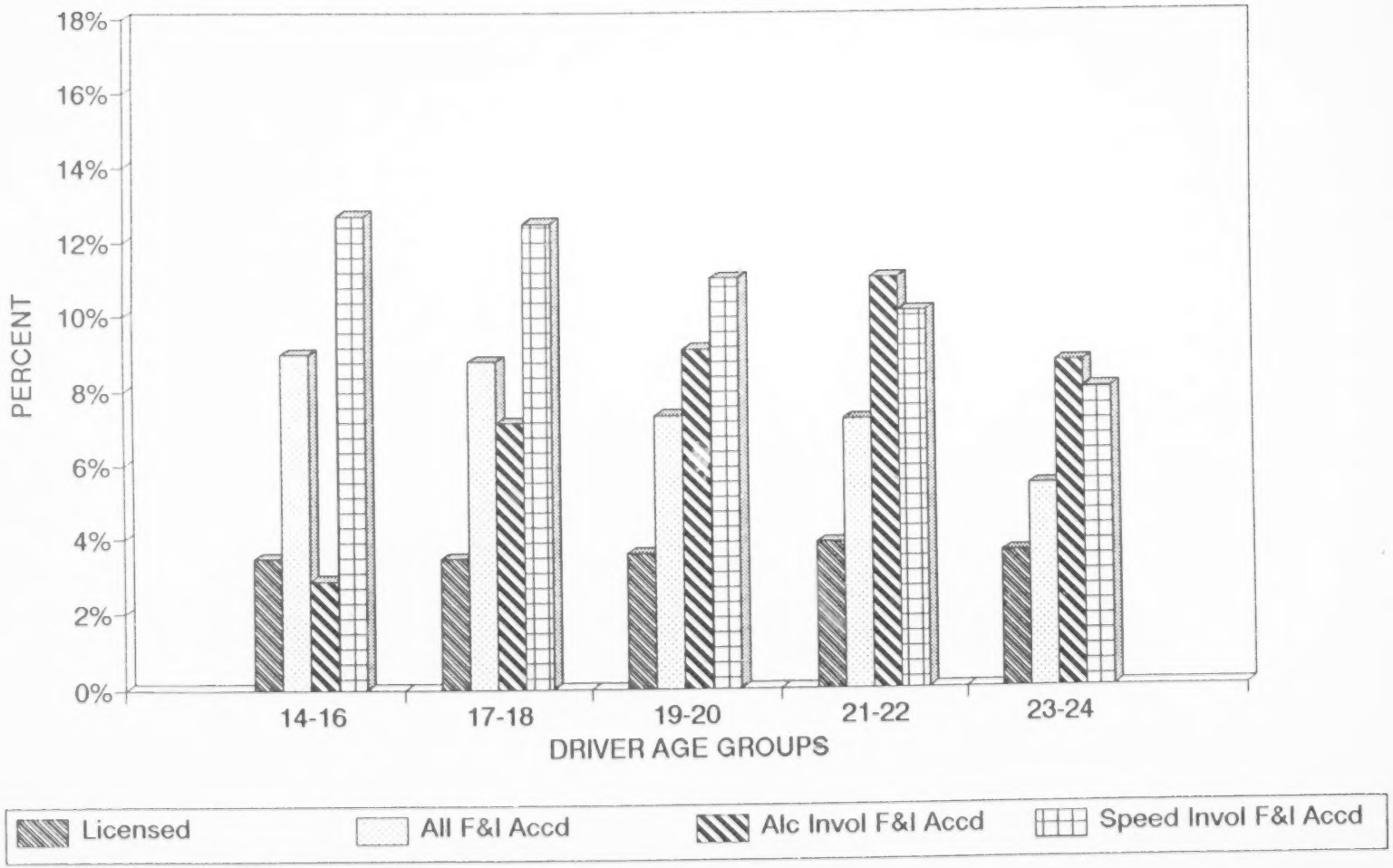


FIGURE 3-10 YOUNG DRIVERS 1991
FATAL & INJURY ACCIDENT-INVOLVED DRIVERS



Driver actions are reported to indicate possible factors that may have contributed to the accidents. These factors are referred to as driver contributing circumstances. Drinking was the leading driver contributing circumstance in fatal accidents during 1991. It was indicated that the drinking of 54 or 31.4 percent of the drivers in fatal accidents contributed to the accident. Exceeding the speed limit and driving on the wrong side of the road were the other leading driver contributing circumstance in fatal accidents. Failing to yield to another vehicle was the leading contributing circumstance in injury accidents. Drinking and exceeding a safe speed but not the legal limit were other leading driver contributing circumstances in injury accidents (see TABLE 3-18).

TABLE 3-18
MOTOR VEHICLE DRIVER CONTRIBUTING CIRCUMSTANCES
1991

	Total Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
No Contributing Circumstances	12,818	52.0	43	25.0	3,660	46.6	9,115	54.9
Drinking	1,602	6.5	54	31.4	788	10.0	760	4.6
Exceeded Speed Limit	1,138	4.6	33	19.2	541	6.9	564	3.4
Wrong Side of Road	488	2.0	27	15.7	198	2.5	263	1.6
Exceeded Safe Speed But Not Limit	1,988	8.1	16	9.3	648	8.3	1,324	8.0
Failed to Yield to Vehicle	3,317	13.5	4	2.3	1,132	14.4	2,181	13.1
Failed to Stop for Stop Sign or Flashing Red	359	1.5	8	4.7	151	1.9	200	1.2
Fell Asleep	368	1.5	8	4.7	200	2.5	160	1.0
Improper Passing	261	1.1	1	0.6	71	0.9	189	1.1
Distracted by Object/ Person in Car	577	2.3	3	1.7	252	3.2	322	1.9
Improper Turn	615	2.5	2	1.2	187	2.4	426	2.6
Following Too Closely	1,234	5.0	2	1.2	518	6.6	714	4.3
Improper Backing	404	1.6	1	0.6	28	0.4	375	2.3
Other*	2,460	10.0	18	10.5	944	12.0	1,498	9.0
Unknown	522	2.1	20	11.6	122	1.6	380	2.3
Total Drivers	24,632		172		7,848		16,612	

Note: The investigating officer may assign from zero to three contributing circumstances to each driver; therefore, the number of drivers in motor vehicle accidents does not equal the number of contributing circumstances. The number of drivers having drinking as a contributing circumstance is equal to the number of reported drinking drivers in accidents.

*Other includes driving under posted minimum, failed to yield to pedestrian, disregarded stop and go signal, disregarded other traffic control devices, improper signal or failure to signal, turning from wrong lane, improper lane change, improper start from parked position, improper parking, failure to comply with license restrictions, drugs, illness, physical impairment, and illegally in roadway.

Source: Department of Transportation: Accident Records

Motorcycles

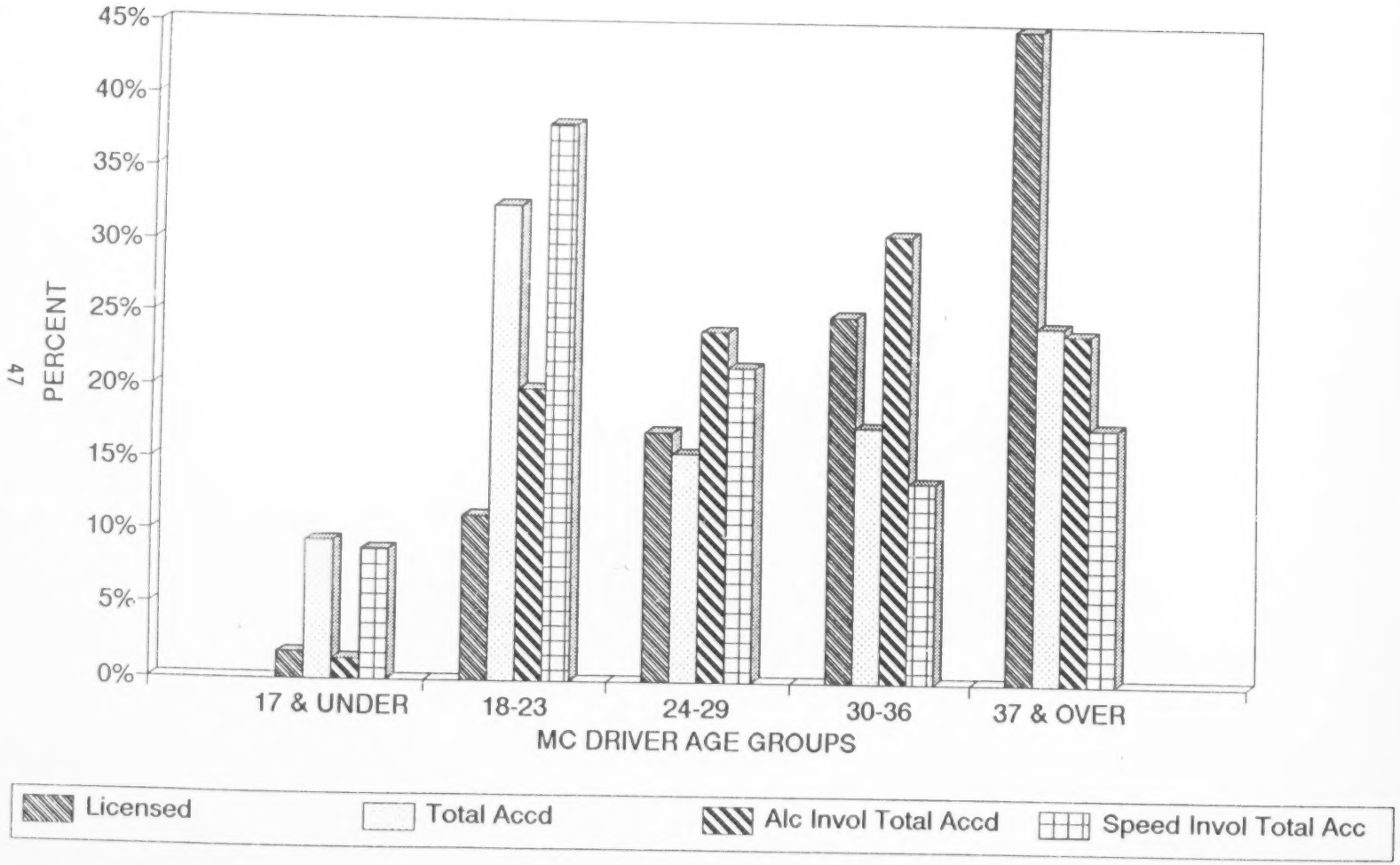
Motorcycle accidents constitute 2.5 percent of all accidents, 6.9 percent of all fatal accidents, and 7.4 percent of all injury accidents. There were 10 people killed and 420 injured on motorcycles in the 407 reported motorcycle accidents during 1991. The number of motorcycle accidents decreased 5.6 percent during 1991 when compared to a 3 year average while the number of licensed motorcyclists have increased 3.6 percent (see TABLE 2-7). The young motorcycle driver is over represented in accidents when compared to their portion of licensed motorcycle operators. The licensed drivers under 20 years of age represent 4.2 percent of the licensed motorcycle drivers, 21.6 percent of drivers involved in motorcycle accidents, 25.5 percent of the speeding drivers involved in motorcycle accidents (see TABLE 3-19 and FIGURE 3-11).

TABLE 3-19
MOTORCYCLISTS BY AGE GROUP
1991

Age Group	Licensed Motorcyclists No.	%	Motorcycle Drivers In Accidents No.	%	Drinking Motorcycle Drivers In Accidents No.	%	Speeding Motorcycle Drivers In Accidents No.	%
0-13	0	0.0	3	0.7	0	0.0	1	1.0
14-15	145	0.3	9	2.2	0	0.0	2	2.0
16-17	633	1.3	27	6.5	1	1.3	6	5.9
18-19	1,183	2.5	51	12.2	1	1.3	17	16.7
20-21	1,858	4.0	49	11.8	6	8.0	13	12.7
22-23	2,207	4.7	36	8.6	8	10.7	9	8.8
24-25	2,373	5.1	27	6.5	6	8.0	9	8.8
26-27	2,631	5.6	15	3.6	5	6.7	7	6.9
28-29	3,017	6.4	23	5.5	7	9.3	6	5.9
30-31	3,350	7.1	20	4.8	9	12.0	7	6.9
32-36	8,426	17.9	53	12.7	14	18.7	7	6.9
37-41	7,297	15.5	36	8.6	12	16.0	7	6.9
42-51	7,868	16.7	46	11.0	5	6.7	9	8.8
52-Over	5,998	12.8	20	4.8	1	1.3	2	2.0
Unknown	0	0.0	2	0.5	0	0.0	0	0.0
Total	46,986	100	417	100	75	100	102	100

Sources: Department of Commerce & Regulation: Driver License Issuance
Department of Transportation: Accidents Records

FIGURE 3-11 MOTORCYCLISTS 1991
ACCIDENT INVOLVED MOTORCYCLE & MOPED DRIVERS



Helmets were used by 96 or 24.1 percent of the motorcycle drivers in accidents while 302 or 75.9 percent did not wear a helmet (see TABLE 3-20). Eight motorcycle drivers and two motorcycle passengers were killed during 1991; two were wearing a helmet, one was wearing a helmet and eye protection, four were wearing eye protection, and three did not wear any safety equipment.

TABLE 3-20
HELMET USE BY MOTORCYCLE DRIVERS IN ACCIDENTS
1991

Age	Helmet Used		Helmet Not Used	
	No.	%	No.	%
6-13	0	0.0	3	100.0
14-15	8	88.9	1	11.1
16-17	12	48.0	13	52.0
18-20	16	20.8	61	79.2
21-24	18	26.9	49	73.1
25-34	16	16.0	84	84.0
35-44	13	17.6	61	82.4
45-Over	13	30.2	30	69.8
Unknown	0	0.0	0	0.0
Total	96	24.1	302	75.9

Note: Percentages are row percents.

Excludes unknown and other helmet usage.

Source: Department of Transportation: Accident Records

Pedestrians

There were eleven pedestrian deaths and 165 injuries in motor vehicle accidents during 1991 (see TABLE 3-21). The youngest pedestrian killed was six years old, while the oldest was 85. Four of the killed pedestrians were over 69 years of age. Of the injured pedestrians, 33.3 percent were under 14 years of age and 55.2 percent were under 25 years of age. Eighty-two percent of the pedestrian injuries occurred in a city (see TABLE 3-23). More male pedestrians were killed while more female pedestrians were injured. Of the 11 pedestrians killed, 9 were male and 2 female. Of the 165 injured, 80 were male and 85 female.

The 165 pedestrian injuries for 1991 was a 19.6 percent increase over 1990's total of 138 and a 20.2 percent increase over the last 3 year average (see TABLE 2-8). Officers reported that five of the 11 pedestrians killed had been drinking alcohol (see TABLE 3-22). The average BAC of those pedestrians who had been drinking was 0.27 percent with BACs ranging from 0.14 percent to 0.46 percent.

TABLE 3-21
AGE OF PEDESTRIANS IN TRAFFIC ACCIDENTS
1991

	Fatalities		Injuries	
	No.	%	No.	%
0-5	0	0.0	18	10.9
6-13	1	9.1	37	22.4
14-19	2	18.2	23	13.9
20-24	1	9.1	13	7.9
25-34	1	9.1	17	10.3
35-44	0	0.0	22	13.3
45-54	0	0.0	12	7.3
55-64	2	18.2	8	4.8
65-Over	4	36.4	15	9.1
Unknown	0	0.0	0	0.0
Total	11	100	165	100

Source: Department of Transportation: Accident Records

TABLE 3-22
ALCOHOL INVOLVEMENT BY PEDESTRIANS
1991

Alcohol Involvement	Fatalities No.	Fatalities %	Injuries No.	Injuries %
Alcohol or Drugs	5	45.5	18	10.9
No Alcohol	5	45.5	139	84.2
Unknown	1	9.1	8	4.8
Total	11	100	165	100

Source: Department of Transportation: Accident Records

TABLE 3-23
RURAL vs. CITY PEDESTRIAN ACCIDENTS
1991

	Fatalities	Injuries
Rural	5	30
City	6	135
Total	11	165

Source: Department of Transportation: Accident Records

Bicycles

There were four bicycle drivers killed and 144 injured in reported motor vehicle accidents during 1991 (see TABLE 3-24). There were three bicycle passengers injured during 1991. The leading factor in bicycle involved crashes was the bicycle driver failing to yield to a motor vehicle which was reported for 32.8 percent of the bicycle drivers. Fifty-six of the bicycle drivers in accidents had no contributing circumstances. The yearly, 1971-1991 trend of bicycle fatalities and injuries is provided in TABLE 2-9.

TABLE 3-24
AGE OF BICYCLE DRIVERS IN TRAFFIC ACCIDENTS
1991

	Fatalities	Injuries	
	Number	Number	%
0-5	0	11	7.6
6-13	3	74	51.4
14-19	0	27	18.8
20-24	0	12	8.3
25-34	0	15	10.4
35-44	1	3	2.1
45-54	0	2	1.4
55-64	0	0	0.0
65-Over	0	0	0.0
Unknown	0	0	0.0
Total	4	144	100

Source: Department of Transportation: Accident Records

IV. GLOSSARY OF TERMS

Reportable Traffic Accident: motor vehicle traffic accident which involves death, injury or property damage to an apparent extent of five hundred dollars or more to any one person's property or accumulated property damage of one thousand dollars per accident.

Fatal Accident: motor vehicle traffic accident in which at least one person dies as the result of the accident and dies within 30 days of the date of the accident.

Injury Accident: motor vehicle accident in which at least one person was injured and no one was killed.

Property Damage Only (PDO) Accident: motor vehicle accident in which no one was killed or injured but there was property damage to an apparent extent of five hundred dollars or more to any one person's property or accumulated property damage of one thousand dollars per accident.

Fatality Rate: number of traffic fatalities per 100 million vehicle miles traveled.

Alcohol Involved Accident: at least one driver, pedestrian, or bicycle driver had been drinking in the opinion of the investigating officer.

Economic Loss: the calculable costs of motor vehicle accidents are wage loss, medical expense, insurance administration cost, and property damage. (Source: Estimating the Costs of Accidents 1990, National Safety Council)

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